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**MIT2011-05 Protected Species Bycatch Newsletter**

***The Ocean Guardian***

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## Introduction

Mitigating the environmental effects of commercial fishing is an ongoing challenge, requiring the involvement of many different parties. Operationally however, fisheries impacts are determined by the day to day practices of fishers themselves. While fishers' main goal is to maximise the efficiency of catching fish, best practice is to do this whilst minimising environmental impacts, including bycatch of protected species. Best practice measures that reduce unintentional captures of protected species are many and varied, and have a diversity of origins. Sometimes, New Zealand fishers are somewhat removed from the development of these methods. For example, a number of effective mitigation measures have emerged from international fleets, and been tested by scientists with experimental results promulgated in the scientific literature. Consequently, an ongoing issue for practitioners working on bycatch reduction lies in communicating best practice messages amongst fishers. This communication requires reaching a spatially disparate audience with highly variable levels of interest and technical knowledge, and using diverse fishing practices. Audience-specific newsletters and magazines are one relatively straightforward way to expose large numbers of fishers to bycatch reduction information.

The Marine Conservation Services (MCS) Annual Plan 2011/12 outlines MCS's approach to improving communication with fishers and the trawl and longline sectors on protected species issues. The overall objective of project MIT2011-05 – Protected species bycatch newsletter – is:

- To produce a newsletter to communicate protected species-related information to trawl and longline fishermen

In New Zealand, trawl and longline fishing both have significant incidences of protected species bycatch, including seabirds, marine mammals, turtles and protected corals (e.g. Rowe 2010; Abraham and Thompson 2011; Ramm 2012). A newsletter delivered to fishermen using these methods reaches those involved with a substantial proportion of fishing impacts on marine protected species.

The *Ocean Guardian* has been developed to address protected species issues holistically, with a focus on mitigation measures. The *Guardian* is comprised of the following Sections:

- **Headline:** Named both for the top profile news story and the headline of a trawl net, this section appears on the front page of the newsletter. It is the main story of the edition, with at least one photo. For example, the section may highlight research on mitigation, showcase bycatch reduction success stories, profile protected species groups of interest, discuss current or emerging issues, etc. Sources of information include research papers, grey literature, and personal contacts.
- **Your Voice:** Also on the front page, a section entitled 'Your Voice' describes opportunities for fishers to share their views and knowledge relevant to protected species, and to develop this knowledge (e.g. carrying their ideas through to developed and effective mitigation measures). This section promotes mitigation competitions, funding opportunities, government and industry consultations, meetings and conferences, etc. It

also reports feedback received from newsletter recipients. Sources of this information include industry literature, internet, personal contacts, NGOs, and government.

- **What's Up?:** This section profiles new and also seasonally appropriate information relevant to fishing and protected species interactions, e.g., things to watch out for in the coming quarter, new work emerging from relevant research, etc.. It includes a photo. This section is compiled from sources including scientific papers, government reports, seasonal bycatch and fishing records, natural history publications, and awareness resources.
- **Who's Who?:** The field of protected species bycatch involves many people and organisations. The purpose of this section is to provide fishermen a window on the scientific and management context of bycatch, by profiling a leading practitioner and their work. This section follows an interview-style question and answer format, with both professional and personal interest questions. For example, profiles could include leading industry practitioners, scientists conducting mitigation research, biologists studying protected species, those involved in international agreements that affect New Zealand protected species management, etc. A photo of the profiled practitioner, ideally at their job, helps personalise the profile.
- **Myth Busters:** The objective of this section is to promulgate accurate and current information on issues which are commonly misunderstood or contentious. The focus is on government initiatives and approaches to protected species management. For example, content describes what Observers do, protected species-related cost recovery, why bycatch reduction and mitigation are important, etc. Sources of 'myths' to be debunked in this section include opinion pieces in fishing-related media, mainstream media misreporting, fishermen themselves, Observer feedback, etc.
- **Worldwatch:** Bycatch reduction is a global issue, and this section places New Zealand in the global context by covering an international issue relating to mitigation and protected species. For example, topics include New Zealand's overseas longline and trawl fishing activities, Regional Fisheries Management Organisations, international research programmes on mitigation measures and relevant marine species, etc. This section includes a photo. Sources of information are research papers, grey literature, internet, personal contacts and bycatch and mitigation-related governmental fora.
- **What the FAQ?!** This section includes a collection of relevant quirky facts on mitigation, protected species, and the frameworks within which they are managed. Facts are sourced from relevant published material.
- **Feedback:** To provide the opportunity for readers to submit feedback at any time, an email address has been provided in this section.

The first two issues of the *Ocean Guardian* are attached (Appendix 1).

## Recipients

Media can only be effective when appropriate audiences are reached. This newsletter is currently targeted to practitioners in the trawl and longline fleets. The distribution list includes:

- Fishing company representatives
- Commercial Stakeholder Organisations (CSOs)
- The Federation of Commercial Fishers
- Fishers reporting landings of >1,000 kg greenweight and more than one trip undertaken in 2010/11, using the trawl or longline method (~370 fishers, identified through the Ministry for Primary Industries' database)
- Stakeholders of Marine Conservation Services (Department of Conservation)
- Seafood industry training bodies
- Ministry for Primary Industries regional offices
- Any other agency, group, or individual on request

Paper and electronic copies are distributed. Both single copies are sent (e.g. to fishers), and multiple copies (e.g. to CSOs). The newsletter is also available online at:

<http://doc.govt.nz/publications/conservation/marine-and-coastal/marine-conservation-services/the-ocean-guardian-newsletter/>

It does not have any other internet presence such as blog sites, Facebook pages, etc.

To reach additional potential recipients, the newsletter was also advertised in *Seafood* magazine prior to the first edition being produced. Subsequently, it has been publicised on the website for the Agreement for the Conservation of Albatrosses and Petrels ([www.acap.aq](http://www.acap.aq)) and through the Seafood Industry Council Chief Executive's "Friday Update" (see below).

## Evaluation

Assessing the penetration of any awareness medium is integral to determining its success. To evaluate the reach and perceived utility of this newsletter, a 10 question survey was created. Immediately after the second issue was distributed, the following questions were circulated as an online questionnaire, via SurveyMonkey.

Questions with check box-style answers were:

- Have you read the Ocean Guardian? (Yes/No)
- Do you find the newsletter interesting? (Yes/No/Sometimes, and a comment field)
- Have others you know read it? (Yes/No)
- Have you discussed it with others you know? (Yes/No)
- The Guardian focuses on protected species issues in fisheries (e.g. seabirds, marine mammals, etc.). Since reading the Guardian, have you become more interested in protected species? (A lot more/a little more/no more)

- After reading about it, would you be interested in trying a new bycatch reduction method? (Yes/Maybe/No)

Questions soliciting more descriptive responses were:

- What do you like best about the Ocean Guardian?
- How could we improve the newsletter?
- Now, the Guardian covers trawl and longline methods only. Should it be expanded to other fishing methods?
- Now, the Guardian focuses on protected species (seabirds, marine mammals, sea turtles etc). Should it also cover other environmental issues relevant to fishing?

The questionnaire was circulated to the newsletter's distribution list, including ~370 fishers, 10 CSOs and industry associations, 16 MPI regional offices, and 143 other stakeholders (such as representatives from industry, government, research providers, and non-governmental organisations, via the Marine Conservation Services stakeholder list). A link to the survey was also circulated by the New Zealand Seafood Industry Council Ltd, on their Chief Executive's "Friday Update" (13 April 2012, text follows).

#### *"The Ocean Guardian*

*A DOC newsletter billed as providing "latest protected species information relevant to trawl and longline fishing methods" is looking for your feedback. You can read a copy of the newsletter, called The Ocean Guardian, online [here](#). The seafood industry was required to pay \$20,000 to produce this newsletter through its DOC levy so if you read it, I'd encourage you to participate in a readership survey to let its producers know what we think. [Click here to go to the survey.](#)"*

Two to three weeks after circulating the survey, recipients were reminded of the opportunity to participate. At initial distribution, and when reminded, participants had access to an 'opt-out' link, if they did not wish to receive further communications relating to the survey. In total, the survey was open for one calendar month. Thirty one responses were received during this period.

Survey responses by question are summarised below and comments are included in full in Appendix 2. If a participant had not read the newsletter (i.e. answered 'No' to Question 1), responses to other survey questions were not considered further. Consequently, five responses were excluded. One opt-out request was also received.

**Table 1.** Summarised responses to survey questions. Question text is in bold. Numbers in parentheses next to questions reflect the number of respondents who did not answer that question. Comments are included in full in Appendix 2.

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**Question 1: Have you read the Ocean Guardian?**

Yes            26        No            5

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**Question 2: Do you find the Ocean Guardian interesting?**

Yes            14        Sometimes    9            No            3

**Please tell us why, or why not.**

Interesting, relevant, focussed content including international material.

Good for keeping up to date and an eye on upcoming issues.

The newsletter is on the right track but it's too early to say overall.

It is not clear why it is needed, especially as most information is sourced from other publications.

It is not sufficiently in depth.

It appears biased against fishing and reads more like an opinion piece than a scientifically-based publication.

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**Question 3: Have others you know read it?**

Yes            16        No            10

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**Question 4. Have you discussed it with others you know?**

Yes            13        No            13

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**Question 5: The Guardian focuses on protected species issues in fisheries (e.g. seabirds, marine mammals, etc.). Since reading the Guardian, have you become more interested in protected species?**

A lot more    1        A little more    6            No more    19

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**Question 6. After reading about it, would you be interested in trying a new bycatch reduction method? (1)**

Yes            6        Maybe        5            No            14

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**Question 7. What do you like best about the Ocean Guardian? (10)**

There is a good range of interesting, informative, and focussed information that can be discussed with others.

It has an informal, easy-to-read style.

The format is good, including the photos.

It's too soon to comment.

Nothing in particular.

Reading about innovations people develop.

---

**Question 8. How could we improve the newsletter? (9)**

Increase readership participation.

It could be longer and more detailed.

There could be more emphasis on local content.

It's good the way it is.

Present issues from different perspectives

Make available references to the sources of information.

Discontinue it and publish the material in other publications.

Increase relevance and focus on commercial fishing audience.

Do not produce hard copies.

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**Question 9. Now, the Guardian covers trawl and longline methods only. Should it be expanded to other fishing methods?**

Yes	10	Maybe	11	No	5
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**Question 10: Now, the Guardian focuses on protected species (seabirds, marine mammals, sea turtles etc). Should it also cover other environmental issues relevant to fishing? (1)**

Yes	7	Maybe	9	No	9
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**Please tell us what else you want to read about.**

The subject matter is good as it is, but more detail would improve it.

Focus on practical things for industry.

Recreational fishing bycatch monitoring

Pollution studies

Dumping at sea

Highly migratory species especially tuna, its overexploitation and management of tuna fisheries

Waste and offal management

Ghost nets

Fuel savings

Design details for any bycatch solutions

Maui's dolphins

Inshore set net fisheries and their impact (or otherwise on penguins and shags).

How funding is spent to avoid, remedy and mitigate interactions with protected species.

It depends on the audience.

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## **Recommendations**

Survey participants provided a range of comments with their responses, from which the following suggestions and recommendations have been drawn.

- Expand the scope of the newsletter to include commercial fishing methods additional to the current focus of trawl and longline.
- Maintain a focus on protected species bycatch reduction, but also include topics suggested by respondents, and material on the wider environmental context of commercial fishing (where funding provisions allow).
- Include an occasional opinion piece, in which two people with divergent views exchange their perspectives on a topical issue.
- Provide key references either in the newsletter, or online when the newsletter is posted on DOC's website, to facilitate access to additional, more detailed, information.
- Consider a name change, or clarify that the newsletter is not affiliated with any other publication or internet post with the same name.
- Consider complementing the newsletter with stories in other publications with industry audiences.
- Reduce the number of hard copies distributed to industry representatives, and focus hard copy distribution on individual fishers.

## **Acknowledgements**

Thanks to Kris Ramm and the MCS team, the Ministry of Primary Industries (especially the RDM team), Who's who interviewees, and those who have contributed photographs, for their assistance with producing the newsletter.

## **Literature cited**

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Rowe, S.J. 2010. Conservation Services Programme observer report 1 July 2007 to 30 June 2008. DOC Marine Conservation Services Series 4.

**Appendix 1:** Issues 1 and 2 of the *Ocean Guardian*



## HEADLINE

### After catching, discharge by batching

We often hear that New Zealand has a world leading approach to fisheries management. Sure it's not perfect. But, it's a lot better than a lot of others! That applies to the environmental side too, though of course, we're not all born twig and tweeters! *Headline* this month says thanks to all the trawler folks involved in offal management research over the last seven years.

It started for some with a workshop in Lyttelton in 2004, and grew into planning meetings, operational briefings, at sea trials, VMPs, time in and out of lots of offices, in lots of ports, and hours at the computer. The result is an evidence-based understanding of the best way to manage trawl waste to reduce seabird kills on trawl warps. So, what do we know now that we didn't before?

- The best way to discharge trawl waste: all at once, when gear is out of the water.
- Discharging waste as it becomes available is worst for birds.
- If gear is in the water, the best way is to discharge waste as one big batch, as fast as possible, after holding as long as possible.
- Even a short holding period can reduce bird issues. 4 – 8 hours is great, but 2 hours should still make a difference. Sometimes holding waste for as little as 30 minutes can make a difference. Any holding period is better than none.
- Mincing can help, especially for keeping large albatrosses at bay. Holding waste for batch discharge is better for more species of seabirds, but mincing is better than nothing.

You might be reading this and thinking 'pfffttt, that's just a load of common sense'. But isn't it good when common sense and science actually agree!

Now we know what to do about offal management, the next big challenge is net captures. Many kinds of seabirds get caught in trawl nets. Bringing a primo bag of food to the sea surface is bound to make any bird go a little doolally! Petrels and shearwaters are especially tricky to distract because they are such good divers. So far, methods to reduce net captures are not well developed. So, if you have an idea, keep an eye on the *Guardian* for funding opportunities to try it!



White-capped albatrosses check out a batch of trawl waste. Photo: DOC.

## YOUR VOICE

### Fishing for ideas



The 2011 International Smart Gear Competition was taken out by the Yamazaki double-weighted branchline, brainchild of Japanese tuna longliner Kazuhiro Yamazaki (above, © Troy Guy). His invention is designed to increase line sink rate, which makes longline gear safer for seabirds. But, the double weighting arrangement is also safer for crew on the haul. This competition has been won by NZ fishermen previously. The first prize is one well worth winning US\$30,000!

For more information see:  
[http://www.smartgear.org/smartgear\\_winners/2011/](http://www.smartgear.org/smartgear_winners/2011/).

Start thinking of your ideas for cntry in 2013!

## WHAT'S UP?

### In the newsletter

Welcome! You are reading the first edition of the *Ocean Guardian*. The *Guardian* will fill you in on the latest protected species information relevant to trawl and longline methods. This will include profiling mitigation measures, interviews with key people, facts on protected species, and the answers to your questions. The *Guardian* will work best with your input! This includes sending us your photos, questions, stories, and rants on things that annoy you. Our email address is: [ocean\\_guardian@yahoo.com](mailto:ocean_guardian@yahoo.com).

We all know that seabirds, seals, sea lions, whales and dolphins are protected. Other marine protected species that can be less well known, or have been protected in recent years include:



Green turtle. Photo: C. Robins & D. Kreutz.

- Sea turtles (yep, we do get them in New Zealand waters)
- White pointer sharks
- Basking and Whale sharks
- Manta rays
- Hard corals

## MYTH BUSTERS

### I only pay if I take an Observer!

**WRONG!** In all fisheries, Observer costs are spread across all quota holders. So, you pay whether or not you take an Observer. To get good information, Observers must cover a range of different vessels. Also, it's fairer for everyone to take their turn with an Observer onboard – we understand that no one wants to be watched all the time! But, if your mate thinks he's being clever and dodging observer coverage, then he's not pulling his weight for the industry. Dodging observer coverage just makes it more expensive for everyone. And, good management decisions start with good information – just ask David Middleton!

## WHO'S WHO?

### Dr. David Middleton – Chief Scientist, New Zealand Seafood Industry Council

David is SeaFIC's science critic in chief....and so much more. The Guardian asked David what spins his wheels at work, and after hours.

*What was life before SeaFIC?*

I started out in ecology but soon focussed on mathematical biology. Fisheries came after I graduated and moved from the UK to the US for contract work. Then, I went to the Falkland Islands, where I got thrown into all aspects of fisheries science. I started to hear about New Zealand – it seemed there was good work going on that was closely linked to management. An opportunity came up at SeaFIC, and it was time to move again!

*What are the worst parts of the job?*

It's tough keeping up! There's so much going on that even reading emails can be too much for one day. Also, when it comes to protected species, emotion can get in the way of good science. Science is about evidence-based decision making, even when it's hard.

*And the best?*

Seeing quality research that really hits the mark! Also, sometimes researchers find unexpected gems - they might look at things a different way, or get a really surprising answer. That keeps the work fresh for me. Also, the cast of characters is entertaining. I work with people across science, industry and government. Seeing such different people understand science, and use it properly, is really rewarding.

*What's most important for 2012?*

For me, 2012 is about ensuring that SeaFIC delivers excellent science advice to industry. A key part of my work will be "Trident". This is a new project that targets fisheries we don't know much about. I want to improve the tools we have for managing these fisheries.

*And in your downtime, how does the Chief Scientist relax?*

I've got kids, and spend a lot of time doing family sports. Also, I stop the microphone feedback at church, where I'm the sound technician. My ideal weekend is more than two days! I love out of town weekends, but not the traffic on the way back in.

*Thanks David – sounds like you're a busy guy!*



David gets set to sample squid eggs off the Falkland Islands.

## WORLD WATCH

### Off the hook in Brazil

Better known for its bronzed babes and beautiful beaches, the seas off Brazil are also rich in seabirds and fishing! Longlines catch seabirds in Brazil, just like in other places like Australia and New Zealand. And, tests have been underway to do something about it. Recently, a research team trialled a device called the Hook Pod. The idea has been developing for years, through work led by mitigation specialist Dr. Ben Sullivan, and a UK company called Fishtek Ltd. Like many good ideas, this one's simple – find a way to cover the hook barb when lines are set, so seabirds can't get caught. The trick is how to uncover the hook later for good fishing. The key bit of engineering behind the Hook Pod is a pressure sensitive valve that releases the hook when it sinks below 10 m. This is too deep for albatrosses to dive. Result!! Safer for birds, and good for fishing.

Now, if you think this Hook Pod deal sounds fiddly and annoying, check out the YouTube video. This shows footage from the trial on a pelagic longliner, and the guys look like they're managing just fine. And, it's still just a prototype. You might also see some good-looking Brazilian birds in there.....with feathers, of course!

<http://www.youtube.com/watch?v=WXqJA3fu0Uc>

All this is still a work in progress. The pod is undergoing further trials at sea to test operational efficacy and examine impacts on seabird and fish catches.



The hook pod loaded with a baited hook on setting. Photo: B. Sullivan

## WHAT THE FAQ?!

### On the road again.....

Many protected species are great ocean travellers. With satellite technology, scientists can unravel the mysteries of their journeys. Did you know:

- Black petrels breed only on Great Barrier and Little Barrier Islands in New Zealand. When they're not breeding, they travel right across the Pacific to a small area off Ecuador and Northern Peru.
- Caught in New Zealand longline fisheries from time to time, leatherback turtles undertake some of the longest migrations known for vertebrate animals. Migrations across the Pacific Ocean have been recorded at 19,000 km!
- Great white sharks tagged in New Zealand waters travel to the Great Barrier Reef, New Caledonia, Vanuatu, Fiji, and Tonga, before returning to New Zealand. Research shows they also dive deeply on these trips, with one recorded down at 1,200 m!

# THE OCEAN GUARDIAN

## FEEDBACK

What do you want to know? To submit feedback, questions for Myth Busters or topics of interest please email [occean\\_guardian@yahoo.com](mailto:occean_guardian@yahoo.com).

Funded through the Department of Conservation MIT2011-05

JPEC Ltd



# THE OCEAN GUARDIAN



Issue 02 | February 2012

## HEADLINE

### The truth about *Jaws*

Around the world, sharks are getting increasing amounts of attention, and not for being in fish and chips. These marine predators are a lot more than big fish fillets with a mouthful of teeth. In fact, they've been around over 400 million years – that's 100 million years before dinosaurs – and have some really special characteristics. This month, the *Guardian* brings you the truth about sharks here and abroad.

Mentioning sharks tends to draw strong responses from most people. For some, it's fear. For others, it's about food. For still others, it's fascination. In New Zealand waters, we have more than 60 types of shark. These range from the tiny pygmy shark (just 30 cm long) to the basking shark (10 m long) and the massive whale shark (12 – 15 m long). Ironically, these giants of the shark family eat tiny prey – plankton for the basking shark, and plankton with small fish like anchovies for the whale shark. Nothing to be afraid of there then.....

New Zealand has four legally protected shark species. These include the gentle giants – basking sharks and whale sharks. Other protected shark species are the deepwater nurse shark and the white pointer (great white) shark. Now you might have wondered why these species were protected. Well, despite their nasty reputation, sharks are really cool animals that are vulnerable to over-exploitation.

Most sharks live 20 – 30 years. They have few young (called pups), and often bear these live and fully formed. Shark pregnancy can be a really long haul. Dogfish, for example, can take up to two years to have their pups. Sharks also become adult much later than a typical fish.

For example, white pointer shark and shortfin mako males mature around 8-10 years old. Females wait longer – 12-14 years for white pointers, and 18 – 20 years for makos. The combination of late maturity, slow reproduction, and low populations compared to other fish means sharks cannot recover quickly if overfished.

Out of our unprotected sharks, New Zealand has eight species in the Quota Management System. Along with the use of catch limits, their status is managed through a National Plan of Action. But, shark management is a global issue and New Zealand's actions are important for our reputation worldwide. For more on what the rest of the world is doing, turn over to World Watch.



Female white pointer shark, 3.1 m. Note the attached tag, used to track shark movements. Photo: Department of Conservation.

## YOUR VOICE

### Got an idea?



Crew deploy tori lines from a South African trawler. Tori lines have been developed by fishermen and scientists to reduce seabird deaths on trawl and longline gear. Photo: J. Pierre.

Sometimes, good ideas need a few helping hands to make them great. The International Mitigation Mentor Programme works on that principle. This Programme gives you access to an international panel, who provide confidential expert advice to help you develop your idea for reducing seabird bycatch. The panel includes scientists, fishermen, and seabird bycatch experts from Australia, New Zealand, Norway, South Africa, and the US. For more information, go to: <http://www.southernseabirds.org/n1759,182.html>

## WHAT'S UP?

### In news just to hand....

- NIWA scientists have started a new project to see where deep sea corals are most at risk from fisheries. Work will include predictive modelling where no information from at-sea sampling exists. Hard corals are protected (including the *Primnoa*, below), and must be reported when caught during fishing.
- Basking sharks are also in the spotlight at NIWA..... Recent information shows a strong decline in basking sharks around New Zealand. Scientists are looking at causes for this decline, including the effects of water temperature.
- Purse seine fisheries usually get a bad rap for dolphin captures. However, protected manta rays also get caught. Current research at NIWA aims to identify ways to reduce manta ray captures.

For further information, go to 'Meetings and project updates' at: <http://www.doc.govt.nz/mcs>



Gorgonian sea fan *Primnoa* spp. Photo: NIWA.

## MYTH BUSTERS

### Why all the fuss about bottom trawling – doesn't that stuff just grow back?

*No, not any time soon....and maybe never the same.*

In New Zealand, deep sea corals have been a particular focus of anti-bottom trawling lobbyists. Are their claims reasonable? It's worth knowing some facts. Bottom trawling occurs widely in New Zealand waters. Here, we focus on impacts on deep sea corals.

Hard corals (protected in New Zealand waters) are very vulnerable to bottom fishing. They are slow-growing (e.g. 1 mm each year!) and often very fragile. Some areas, including seamounts, have been closed to bottom fishing to protect corals. In other areas, corals are still caught especially when orange roughy and deep sea orcos are targeted.

Time taken for hard corals to regenerate in New Zealand waters is not well known. However, studies 5-10 years after trawling do not show coral recovery here or off Tasmania. Regeneration may be slowed by a lack of colonists. Even if recolonisation does eventually occur, the result will probably be different to what was there before.

## WHO'S WHO?

### Barry Baker – Bycatch Councillor, Convention on Migratory Species (CMS)

CMS is a treaty that aims to conserve migratory animals throughout their ranges. This includes many marine species, like seabirds, sharks and turtles. 116 countries are currently signed up to CMS, including New Zealand. As Bycatch Councillor, Barry's role is to provide expert advice to the Scientific Council and the Conference of Parties. The *Guardian* asked Barry more about this international role.

*How did you get involved with bycatch issues?*

I worked on seabirds for about 13 years with the Australian government. Bycatch is a key threat for seabirds, and because bycatch reduction measures must consider all target and non-target species, my interest soon spread to other species like turtles and sharks as well.

*What sort of experience do you bring to the Councillor role?*

Much of my work has focussed on finding solutions to human - wildlife interactions. I've worked in both public and private sectors, with industry, and on education and outreach. As well as Bycatch Councillor, I work on bycatch-related issues with other international forums including those working on fisheries and species management. This broad experience and perspective is very useful in my CMS role.

*Are there any particular highlights of working in this area?*

I'm very positive about the role CMS plays in the bycatch arena, and in sustainable fishing. There is a growing awareness of bycatch issues amongst CMS member countries, and countries are increasingly prepared to tackle these issues. This includes working with industry to find solutions that are practical and improve fishing efficiency. The ongoing challenge is addressing bycatch across all fisheries, not just for the main gear types.

*And away from it all, how does a bycatch expert unwind?*

I travel a lot and run my own business, which doesn't leave much down time. But, I enjoy breeding and training gundogs, growing bonsai, and photography.

*Thanks Barry. Hope CMS keeps up the good work.*



Barry in action at CMS.  
[www.iisd.ca/cms/cop9/](http://www.iisd.ca/cms/cop9/)

## WORLD WATCH

### How are we doing in the world?

We already know that some shark species are protected in New Zealand. But what happens outside our waters?

Some sharks roam large areas and management varies a lot between countries. Member countries and some parts of international waters are covered by Regional Fisheries Management Organisations (RFMOs). New Zealand-flagged vessels must abide by RFMO rules when they fish in RFMO areas. Since the 1990s, there have been shark-specific measures at some RFMOs. These include collecting data about shark catches. Typically, shark finning is controlled (e.g. fins cannot exceed 5% of total shark landings) or banned. Sometimes, to protect the future of populations, RFMOs may encourage live release of some species and discourage or prohibit vessels from fishing in shark nursery areas.

Basking sharks, whale sharks and white pointer sharks are listed by CITES - the Convention on International Trade in Endangered Species of Wild Flora and Fauna - whoa, that's a mouthful! CITES prohibits trade in these sharks and their body parts (e.g. teeth), across 175 member countries including New Zealand.

Other shark protection measures are area-based. For example, Palau, an island nation east of the Philippines, is surrounded by a shark sanctuary. There, shark tourism brings in US\$18 million per year (8% of the country's gross domestic product) - each live shark is worth around US\$180,000 annually, compared to \$108 if sold dead.

Currently, New Zealand is following, rather than leading global shark management. We manage through catch limits under the QMS or with complete protection (see *Headline*). However, other parts of the world are increasingly banning shark finning, and this is one aspect of New Zealand's management that will likely need further review.



Top predators face off at sea...giant petrel versus blue shark.  
Photo: Albatross Encounter Kalkoura.

## WHAT THE FAQ?!

### 400 million years of evolution can't be wrong....

Sharks are an amazingly diverse group and only a few fit the 'scary' profile. You might not know that.....

- Shark skeletons are made of cartilage, not bone – the same stuff that makes up human ears and noses.
- Sharks grow teeth throughout their lives – sometimes as fast as every 8 days!
- White pointer sharks breed around northern New Zealand, and move south to be near seal colonies (buffet restaurants for white pointers!) as they grow.

# THE OCEAN GUARDIAN

## FEEDBACK

What do you want to know? To submit feedback, questions for Myth Busters or topics of interest please email [ocean\\_guardian@yahoo.com](mailto:ocean_guardian@yahoo.com).

Funded through the Department of Conservation MIT2011-05

JPEC<sup>td</sup>

**Appendix 2:** Responses to the survey on the content of the *Ocean Guardian* newsletter. Responses for the 26 surveys are reproduced here verbatim, except for the correction of some minor typographical errors.

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**Question 2: Do you find the Ocean Guardian interesting?**

**Please tell us why, or why not.**

- Interesting mix of news, topical comment and insight, and not just NZ-focussed.
- topics of interest, to me
- After 2 issues, it's a good interesting e-zine but with all due respect - isn't it a little early to tell?
- great to keep up to date with what is happening around the world and in NZ with regards protected species
- just keeping eye on what's in store for fishermen
- Keeping up to date
- I appreciate the bite size information and I like the sense that it is relevant to us as a Nation. I am encouraged as a Nation on the global platform we seem to be doing our part in terms of sustainable management and proactive in the CITES flora and fauna - reading this is very positive.
- Having scanned the first couple of issues, I certainly think a newsletter like the ocean guardian is a great way to communicate scientific findings and their place within a context and audience beyond academic readership. Communication in participatory, cooperative fisheries-science partnerships is very important. However, it will heavily rely on the acceptance, participation and feedback by the readers. Maybe reviewing the success of the Ocean Guardian after two issues is a little too early....
- Most of what I read is out of date and/or previously published in other journals. I don't know why a separate publication is necessary and I have no idea of the distribution.
- A little biased
- it reads more like an opinion piece than a scientifically based publication, although it purports to be authoritative a lot of the assertions it makes are contestable
- Much of the information is available elsewhere
- I thought it lacked technical detail, substance and innovative / new ideas. I haven't met anyone in the commercial fishing industry who thought it was a particularly useful or informative publication, although most of us have read it. I googled the Guardian's Facebook site and was put off by some of the comments and links there which made me less interested (more sceptical) in the information contained in the newsletter. An epublication would have been adequate; the printed copy was an overkill plus the distribution work was off loaded to people like me, which I got a bit grumpy about. Getting 150 newsletters in the mail with the offer to pass it on was easy for you but work for me. (*Author's note: The Ocean Guardian newsletter does not have a Facebook site or any other site, except where the newsletter is posted at: <http://www.doc.govt.nz/publications/conservation/marine-and-coastal/marine-conservation-services/the-ocean-guardian-newsletter/>*).
- You have a biased view against commercial fishing

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**Question 7. What do you like best about the Ocean Guardian?**

- Information
- Interesting and informative.
- It's informal, but still informative use of language.
- Interesting mix of news, topical comment and insight, and not just NZ-focussed.
- cool pics, good format, interesting info.
- Largely the information is very informative, up to date and relevant, subject matter comes in small bites enough to engage a discussion about the issue with other likeminded readers while leaving you wanting to know more.
- only had two issues too soon to make a call



- very informative and detailed
- Good range of protected species and mitigation method information
- easy to read
- just seeing what innovations people come up with
- The end
- Nothing
- It is brief
- There was nothing that stood out about this newsletter. I get a lot of information over my desk in the form of publications, email links, google, industry newsletters etc. I don't think that this newsletter added any new information or new ideas.

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**Question 8. How could we improve the newsletter?**

- More readership participation.
- Could be longer with the extra space devoted to slightly more detailed appraisal of issues - at present is perhaps a bit 'tabloidy' - and too many exclamation marks.
- its good the way it is
- Not sure?
- I would like more information, which may require it to be longer
- could be bit more local content, have to be careful not to alienate readers with too much Green-power!
- Gathering as much information as possible on solutions and getting it out there
- Depends on target readership.
- Drop it and make the effort to have the information published in the mainstream magazines patronised by the recreational and commercial fishing industries.
- Get other views...a bit lopsided at present
- Bin it
- It is not obvious who the audience is, so that is a hard question to answer. And the answers given below depend on who it is for. I'm always suspicious of information that does not give credit where credit is due. Sometimes there is an indication of where the info is from, but not often.
- Epublication only; written in a style and format for commercial fishers rather than the general public. More topical, more relevant.
- look at both sides of the marine environment. those that need to access it for commercial fishing and have a weighted view on the conservation side. there are positives to trawling but the latest newsletter suggest that we plough through coral fields endlessly

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**Question 10: Now, the Guardian focuses on protected species (seabirds, marine mammals, sea turtles etc). Should it also cover other environmental issues relevant to fishing?**

**Please tell us what else you want to read about.**

- Good mix as is, just more in-depth would be an improvement.
- Practical things-people are required to make a living
- Recreational fishing bycatch monitoring, pollution studies, dumping at sea, etc
- I'm interested in the Highly Migratory Species in particular the Tuna species the impacts of

fishing, what is being done about over exploitation, the status of the relationship between countries/ fishing forums having an interest in this fishery.

- Waste, offal management, ghost nets etc.
- Fuel savings. Design details for any bycatch solutions
- Maui dolphins
- As long as the focus isn't lost of updating readers on protected species news etc
- My particular interest is inshore set net fisheries and their impact (or otherwise on penguins and shags). There may not be much to include in the newsletter.
- Less waste of money
- I am interested in all environmental issues but I don't know who the Guardian is aimed at so it's hard to say what issues it should cover.
- I want to read how Government and stakeholder money is being spent to avoid, remedy and mitigate interactions with protected species. I don't want to read puff pieces about scientists building reputations - I want to read about work being done - about results. The glossiness of the current publication is a front (and an affront) - substance should take precedence please.
- It all depends on what the point of it is and who the audience is. Even the survey is written as though the target audience is not known - though there is a direct question for fishers. There seem to be several different levels of knowledge required to read it. There may be other things that DOC could put its dollars towards, given that there are other sources of this information.
- This publication is currently paid for by commercial fishers from the protected species levy. Not sure how it would be paid for if it covered a broader range of issues. Would you intend to widen the readership scope? Where do you get the information from now and who are you consulting in the industry to ensure that it is relevant to NZ?
- not unless it is just to be used to slam dunk commercial fishing. Conservationists need to grow up and realise that commercial fishers are not out to rape and pillage the oceans. there are a number of stringent measures in place to mitigate protected species interactions. there is also a trawl footprint that should not necessarily be regenerated back to coral beds unless it is proven that certain areas add to the fish populations and biodiversity of certain areas. conservationists want commercial trawling to be converted to longline to stop bottom effects. this is a totally uneducated and emotive view on why trawling was implemented in the first place. decisions need to be made on why a fish goes to a hook, is herded by a trawl or needs to be caught in a set net. emotive bullying by newsletters or groups wanting money to fill their coffers through subscriptions is morally wrong.